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10/565,562

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Andreas Huehsam

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ALEXANDRIA, VA 22314

EXAMINER

PARKER, FREDERICK JOHN

ART UNIT

PAPER NUMBER

1792

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/565,562	<b>Applicant(s)</b> HUEHSAM, ANDREAS	
	<b>Examiner</b> Frederick J. Parker	<b>Art Unit</b> 1792	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 October 2007.  
 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 12,13,16-28,32 and 33 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
 6) ☒ Claim(s) 12,13,16-28,32 and 33 is/are rejected.  
 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \*    c) ☐ None of:  
         1. ☐ Certified copies of the priority documents have been received.  
         2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>12-11-07</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

#### ***Specification***

The amendments in response to the Objection to the Specification of the Previous Office Action are acknowledged and appreciated, and the Examiner withdraws the objections.

#### ***Claim Objections***

The amendments in response to the Claim Objections of the Previous Office Action are acknowledged and appreciated, and the Examiner withdraws the objections.

#### ***Claim Rejections - 35 USC § 112***

The amendments in response to the 35 USC 112 rejections of the Previous Office Action are acknowledged and appreciated, and the Examiner withdraws the rejections.

#### ***Claim Rejections - 35 USC § 103***

The amendments in response to the 35 USC 103 rejections of the Previous Office Action are acknowledged and appreciated, and the Examiner withdraws the rejections. The new rejections are necessitated by amendments.

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 12-13, 16-27, 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Habsburg-Lothringen US 5540776 in view of Hopeck US 5316801 and Otani et al US 5741558 and further in view of Matsuzaki et al US 5319002.

Habsburg-Lothringen teaches a method of coating 3-dimensional grounded (i.e. "lower potential" per clm 13) electrical armature and stator workpieces in a conveyor production line comprising a single closed housing (fig. 2) including a powder coating means and a cleaning means comprising suction (col. 11, 18-30 and elsewhere) for removing excess or undesired coating powder from coated workpieces (col. 3, 33-44 and elsewhere), the coating means

exemplified by an electrostatic fluidized bed but explicitly not limited thereto, the background teaching the use of spray means for powder coating such articles (col. 4, 43-52 & “Background...” section, etc). Hence the use of an electrostatic spray means instead of the exemplified fluidizing means would have been obvious because the reference itself recognizes the utility of electrostatic spraying for the same purpose with the benefit of spraying specific desired portions of the substrate. **The coating of slots in stators is cited, for example col. 13, 44-45, etc.** The reference is silent on the thickness of coatings; however, Hopeck teaches a similar electrostatic spray coating of the same (epoxy) powders in which it is stated on col. 4, 14-18 **that coatings up to approximately 0.045”/1.14 mm (within Applicants’ range of 1-2 mm) can be achieved before the insulating qualities of the coating material cause the thickness to become self-limiting** (same principle as Applicants, see Spec. [0009]). The subject matter as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made if the overlapping portion of the coating thickness disclosed by the reference were selected because overlapping ranges have been held to be a prima facie case of obviousness, see *In re Wortheim* 191 USPQ 90. Coated workpieces are heated to cure, (Background... section and elsewhere) per claim 26. Cooling is not cited but would have been apparent to give the coated product practical commercial utility since an article at curing temperatures would not be commercially viable, per claim 27. However, details of the spraying means and particle size are not disclosed.

Otani et al teaches a high voltage electrostatic spray means (clms 18,20) for direct coating of 3-dimensional objects on conveyors without further limitation, thereby clearly capable of coating the 3-dimensional electrical workpieces of Habsburg-Lothringen. The spray means comprises a

spray gun, powder source/ hopper, pressurized air pump, air regulator, etc so the pressurized air source (clm 16) is supplied and regulated which in turn regulates the powder aspirated/ drawn into the powder pump and discharged from the powder gun (clm 21,22,24,25). See col. 2, 39-61; col. 4, 46-64, fig. 1, and elsewhere. It is recognized powder spraying of 3-dimensional objects minimizes the amount of wasted coating material (as also suggested by Habsburg-Lothringen), which is an economic incentive. It is well-established that economics alone may provide motivation or suggestion to combine a reference, *In re Clinton*, 188 USPQ365. Particle size is not taught. Matsuzaki et al recognizes the need for electrostatically applicable epoxy-based powders which form thick coatings, and set forth a coating powder having particles in the range of 3-180 microns applied by an electrostatic coating gun (col. 2, 59-63) or other such means. Application of the inventive epoxy-based powders onto slots of motor armatures are cited in Example 1 (PS about 165 microns).

As to new claim 33, the combination of prior art references contain the essential limitations of the claim including a workpiece with slots and electrostatic powder spraying of particle sizes which overlap with Applicants' "coarse plastic powder" having a diameter of 150 microns. Therefore, it would have been reasonable to expect that the same phenomenon would have occurred in both Applicants' process and that of the prior art, particularly given the passage of Hopeck highlighted above, such that at *least some powder* would have been deposited "within the axial slots" of the workpieces, which is all that is required of the claim limitation of claim 33. Thus, the prior art would have met the limitations of the claim.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Habsburg-Lothringen by incorporating the spray means of Otani

et al and the known particle sizes for such spray means as taught by Matsuzaki et to provide a thick powder coating means for 3-dimensional workpieces which provide uniform insulating films which can be applied electrostatically while reducing powder waste/ improving process economics.

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3. Claims 28,32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Habsburg-Lothringen US 5540776 in view of Hopeck US 5316801 in view of Otani et al US 5741558 and Matsuzaki et al.

The previously discussed references are cited for the same reasons which are incorporated herein. Further, Habsburg-Lothringen teaches an apparatus for coating 3-dimensional workpiece in a conveyor production line comprising a single housing including a powder coating means, including sprayers, and a suction/ vacuum cleaning means for removing excess or undesired coating powder from workpieces (col. 3, 33-44 and elsewhere). The coating means is exemplified by a fluidized bed but explicitly not limited thereto, the background teaching the use of spray means for powder coating such articles (col. 4, 43-52 & "Background..." section, etc). Hence the use of a spray means instead of the exemplified fluidizing means would have been obvious because the reference itself recognizes the utility and equivalence of spraying for the same purpose with the benefit of spraying coating specific desired portions of the substrate. While details of the spraying means are not disclosed, Otani et al teaches such a spray means for coating 3-dimensional objects on conveyors without limitations, thereby clearly capable of coating the workpieces of Habsburg-Lothringen. The spray means comprises a spray gun, powder source/ hopper, pressurized air pump, air regulator, etc so the pressurized air source is

supplied and regulated which in turn regulates the powder aspirated/ drawn into the powder pump and discharged from the powder gun. See col. 2, 39-61; col. 4, 46-64, fig. 1, and elsewhere. It is recognized powder spraying of 3-dimensional objects minimizes the amount of wasted coating material (as also suggested by Habsburg-Lothringen), which is an economic incentive. It is well-established that economics alone may provide motivation or suggestion to combine a reference, *In re Clinton*, 188 USPQ365. While particle sizes are not cited, Matsuzaki et al teaches the need for electrostatically applicable epoxy-based powders by spraying which form thick coatings, and set forth a coating powder having particles in the range of 3-180 microns applied by an electrostatic coating gun (col. 2, 59-63) as well as other electrostatic means. Application of the inventive epoxy-based powders onto slots of motor armatures are cited in Example 1 (PS about 165 microns).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Habsburg-Lothringen by incorporating the spray means of Otani et al to provide a known coating means for 3-dimensional workpieces which further provides the benefit of reducing powder waste/ improving process economics and the known particle size ranges of Matsuzaki to form thick powder coatings. It is further the Examiner's position that the limitations of Applicants claims 28 & 32 merely combine a large number of known apparatus limitations to form a coating device, wherein the features of the limitations are known in the recited art and their combination merely leads to a predictable outcome and therefore the combination of structural elements do not impart patentability because of the predictability of the outcome. The combination of familiar elements according to known

methods is generally obvious when it does no more than yield predictable results, KSR, 127 Sup. Ct. at 1739, 2007.

***Response to Arguments***

Applicants arguments have been considered.

Applicants summary of the alleged process on pages 2-3 and 10 of 12 is not commensurate with the scope of claims 12-13, 16-28, 32 because nowhere do the methods require that the insulative coating builds up on the ends to a point where a charge concentration/ saturation occurs so the sprayed charged particles enter the slots because external force field lines are not longer present/ the Faraday Cage effect is essentially neutralized. The claims never require this phenomenon. All claim 12 requires is powder spraying a layer of 1-2 mm thickness "onto the body"; not a particle has to enter the slot and no such limitations are required of dependant claims 13, 16-27. Thus, the assessment is incorrect and clearly not commensurate with the scope of the claims. The Examiner notes that Hopeck also recognizes the self-limiting thickness phenomenon on col. 4, as discussed and emphasized above.

Page 10 makes the erroneous allegation that H-L does not provide an indication of "direct powder spraying onto the body"; this is incorrect. Col. 4, 46-48 explicitly teaches their method is merely exemplified by an electrostatic fluidized bed and "is not limited to that type of coating". Further, in the "Background..." Section, electrostatic spray coating is discussed such that in context one of ordinary skill would have looked to known electrostatic powder application means such as powder coating. Stating it is a "direct" method is simply semantics because any spray method is a directed method: you point the spray gun, it sprays in the pointed direction.



Still further, secondary references expressly teach such electrostatic spraying using a coating gun to apply particles to 180 microns, see discussion of Matsuzaki.

Applicants discussion of Faraday Cage effects, well-known in the art, is pointless since claims 12-32 never require particles to enter the slots.

The particle size of at least 150 microns is discussed in the prior art (see discussion of Matsuzaki) and is known to be applicable by electrostatic spray guns. Matsuzaki further equates electrostatic spray, fluidized bed and similar means so the points of applicants arguments on pages 10-11 are unclear. Most certainly, Applicants' statement that "Until now, it was only known to use markedly smaller particles with mean diameters < 100 microns", is moot in view of the disclosure of Matsuzaki.

Applicants argument of impermissible hindsight is simply due to the individual treatment of each reference without dealing with the references in the rejection as a whole. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170

USPQ 209 (CCPA 1971). In this case, the knowledge is combined from the references as provided.

It is the Examiner's position that the apparatus is simply a collection of familiar structural elements known in the spray coating art, and hence the apparatus is obvious because its outcome does no more than yield predictable results based upon the teachings of the prior art.

For all the above reasons, the rejection of claims 12-13,16-28,32 are maintained because the rejections provide a prima facie case of obviousness.

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Liberto is cited to demonstrate that the state of the art in electrostatic spraying as of 1994 conventionally included the structural elements recited in Applicants' apparatus claims.

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frederick J. Parker whose telephone number is 571/ 272-1426. The examiner can normally be reached on Mon-Thur. 6:15am -3:45pm, and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571/272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Frederick J. Parker  
Primary Examiner  
Art Unit 1792

fjp